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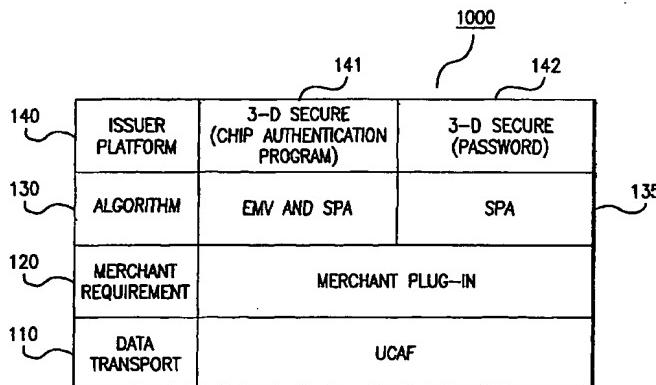
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(54) Title: SYSTEMS AND METHODS FOR CONDUCTING SECURE PAYMENT TRANSACTIONS USING A FORMATTED DATA STRUCTURE



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(57) Abstract: A formatted data structure is provided for conveying the results of ecommerce authentication programs that are used to authenticate a cardholder's on-line transactions. The data structure, which has at most a 20-byte length, is designed to be compatible with 3-D Secure message protocols used in e-commerce. The data structure includes designated fields that include a hash of the merchant's name, identify an authentication service provider, identify the authentication method used, and include a merchant authentication code which ties cardholder information to the transaction. Secure payment algorithms are provided for use by the ecommerce authentication programs to generate authentication results in the desired format. In one secure payment algorithm, a secret key is used to encrypt a concatenation of a cardholder account number with information from designated fields of the data structure. In another secure payment algorithm, a pair of secret keys is used to encrypt a concatenation of the cardholder's account number, card expiration date and service code. In both cases, portions of the encryption results are used to define the merchant authentication code.



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A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 705/26,27,30,39,40,41,42,44,64,67
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2001/0032154 A1 (SCHUMMER) 18 October 2001 (18.10.2001), entire document.	1-22
A	US 2002/0194138 A1 (DOMINGUEZ et al) 19 December 2002 (19.12.2002), entire document.	1-22
A,P	US 2003/0212642 A1 (WELLER et al) 13 November 2003 (13.11.2003), entire document.	1-22

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